

INDEX TO VOLUME 45

METAL FINISHING, January-December, 1947

ARTICLES

A

Abstracts of Papers Presented at 34th Annual A.E.S. Convention	8-48
After Taxes Profits, If Any	8-65
Alkaline Metal Cleaners, Testing of	12-77
All Our Yesterdays—Part VI	7-77
Alloys by Electrodeposition	12-65
Aluminum Dyeing, Color Control for	1-64
Aluminum, Electroplating on	11-67
Aluminum Electroplating in America	5-66
Aluminum Electropolishing Plant	8-63
American Electroplaters' Society Annual Convention	6-70
American Electroplaters' Society Convention Breaks All Records	7-62
American Electroplaters' Society National Convention and Industrial Finishing Exposition	5-54
Application of Metallic Coatings	5-62, 12-71
Application of Zinc Coatings	12-71
Automatic Plating Plant, Largest in the World	7-67

B

Barrel Plated Multiple Coatings	6-81
Barrel Plating, Pre-treatment for	11-75
Barrel Plating Technique, Improved	3-55
Brass Plating: Routine Chemical Control	4-66
Buffing Problem, Fishtails—An Old	9-68

C

Cell, The Hull	1-59
Chemicals in Electroplating, Toxicity	8-55, 9-79
Chrome Plating, Hard, Metal Surfacing by	7-71
Cleaning—Methods and Results, Metal	10-82
Cleaners, Testing of	12-77
Color Control for Aluminum Dyeing	1-64
Consulting the Floor Doctor	12-62
Control Laboratory, Electroplating	9-60
Control, Routine Chemical	4-66
Copper Reduction on Non-Conductors, Practical	9-64
Copper, Oxidation of with Sodium Chlorite	3-61
Cosmetic Gloves from Electroformed Molds	8-61
Cyanide Wastes, Disposal of	2-78, 3-68

D

Determination of Free Sodium Hydroxide and Sodium Carbonate in Plating Solutions	4-72
Determination of Silver and Copper in One Sample of Plating Solution	11-80
Developments of 1946	1-50
Disposal of Cyanide Wastes	2-78, 3-68

E

Electrodeposited Coatings, Engineering Applications of	6-78
Electrodeposited Tin Coatings, Fusing of	4-63
Electrodeposition, Alloys by	12-65
Electroformed Molds, Gloves from	8-61
Electrolytic Polishing of Magnesium	6-86, 7-84
Electroplated Zinc, Surface Texture Study of	8-68
Electroplater, Metallography for the	4-54, 5-68
Electroplaters' Society Convention Breaks All Records, American	7-62
Electroplating Control Laboratory	9-60, 10-68
Electroplating in America, Aluminum	5-66
Electroplating in World War II, Military Applications of	1-66

Electroplating Non-Conductors	6-95
Electroplating on Aluminum	11-67
Electroplating, Rectifiers for	2-73, 4-58, 5-72, 6-88, 9-75
Electroplating, Introductory Survey of	11-70, 12-79
Electroplating Zinc Base Die Castings	3-58
Electropolishing Plant, Aluminum	8-63
Electropolishing Silver to Reduce Finishing Costs	5-60
Electropolishing with Fluosulfonic Acid	2-63, 3-64
Engineering a Small Job-Plating Shop	7-69
Engineering Application of Electrodeposited Coatings	6-78
Evaluation of Metal Surfaces, Optical Methods for	4-70

F

Fellowship Club, International	7-64
Finishing Copper by Oxidation with Sodium Chlorite	3-61
Finishing Exposition in Eleven Years, First	3-50
Finishing Exposition, Industrial	2-62, 7-65
First Finishing Exposition in Eleven Years	3-50
Fishtails—An Old Buffing Problem	9-68
Floor Doctor, Consulting the	12-62
Fluid Mechanics: Forgotten Factor in Electroplating	10-72
Fluosulfonic Acid, Electroplating with	2-63, 3-64
Forgotten Factor in Electroplating: Fluid Mechanics	10-72
Free Sodium Hydroxide and Sodium Carbonate in Plating Solutions, Determination of	4-72
Fusing of Electrodeposited Tin Coatings	4-63

G

Gloves from Electroformed Molds, Cosmetic	8-61
Grinding Goes Modern, Polishing and	3-51

H

Hard Chromium Plating, Metal Surfacing by	7-71
Heavy Industrial Nickel Plating	5-56
High Production Job Shop Plating	9-71
Hull Cell, The	1-59

I

Improved Barrel Plating Technique	3-55
Industrial Finishing Exposition	2-62, 7-65
Industrial Plating of Zinc Base Die Castings	7-82
International Fellowship Club	7-64
Introductory Survey of Electroplating	11-70, 12-79

J

Job-Plating Shop Engineering, A	7-69
Job Shop Plating High Production	9-71

L

Largest Automatic Plating Plant in the World	7-67
Los Angeles Plating Plant Explosion	3-72

M

Magnesium, Electrolytic Polishing of	6-86, 7-84
Mechanical Surface Finishing, Modern	11-62, 12-82
Metal Cleaning—Methods and Results	10-82
Metal Congress and Exposition to Be Held in Chicago, October 18-24, National	10-60
Metal Surfacing by Hard Chromium Plating	7-71
Metallic Coatings, Application of	5-62, 6-91
Metallography for the Electroplater	4-54, 5-68
Military Applications of Electroplating in World War II	1-66

Modern Mechanical Surface Finishing	11-62, 12-82
Multiple Coatings, Barrel Plated	6-81

N

National Metal Congress and Exposition to Be Held in Chicago, October 18-24	10-60
Nickel Plating, Heavy Industrial	5-56
Non-Conductors, Copper Reduction on	9-68
Non-Conductors, Electroplating	6-95

O

Optical Methods for Evaluation of Metal Surfaces	4-70
Our Yesterdays, All—Part VI	7-77
Oxidation with Sodium Chlorite, Finishing Copper by	3-61

P

Palladium, Plating with	1-50
Papers Presented at 34th Annual A.E.S. Convention, Abstracts of	8-48
Periodic Reverse-Current Electroplating	2-60
Plated Zinc Base Die Castings	10-60
Plating of Zinc Base Die Castings, Industrial	7-82
Plating Plant Explosion, Los Angeles	3-72
Plating with Platinum, Palladium and Rhodium	1-50
Plating with Palladium and Rhodium, Plating with	1-50
Polishing and Grinding Goes Modern	3-51
Polishing of Magnesium, Electrolytic	6-86, 7-84
Polishing Trade, Tricks of the	11-78
Practical Copper Reduction on Non-Conductors	9-64
Practical Methods in Heavy Industrial Nickel Plating	5-56
Pre-treatment for Barrel Plating	11-75
Profits After Taxes, If Any	8-65

R

Rectifiers for Electroplating	2-73, 4-58, 5-72, 6-88, 9-75
Reduce Finishing Costs, Electroplating Silver to	5-60
Reverse-Current Electroplating, Periodic	2-60
Rhodium, Plating with	1-50
Routine Chemical Control, Brass Plating	4-66

S

Silver and Copper, Determination of, in One Sample of Plating Solution	11-80
Silver, Electroplating of	5-60
Small Job-Plating Shop, Engineering a	7-69
Surface Texture Study of Electroplated Zinc	8-68
Survey of Electroplating, Introductory	11-70, 12-79

T

Taxes, Profits After	8-65
Technical Developments of 1946	1-50
Testing of Alkaline Metal Cleaners	12-77
Tin Coatings, Fusing of	4-63
Toxicity of Chemicals in Electroplating	8-55, 9-79
Tricks of the Polishing Trade	11-78

Z

Zinc Base Die Castings, Electroplating	3-58
Zinc Base Die Castings, Industrial Plating of	7-82
Zinc Base Die Castings, Plated	10-60
Zinc Coatings, Application of	12-71
Zinc, Electroplated Surface Texture Study of	8-68

HIGH TEMPERATURE LUCITE PLATING TANKS for LABORATORY and PRODUCTION PLATING



Singleton tanks are made of high temperature Lucite to give unlimited life, resistance to all aqueous acids with no contamination even when changing from one bath to another, ruggedness, heat and electrical insulation, and transparency.

SEE THE BATH IN ACTION

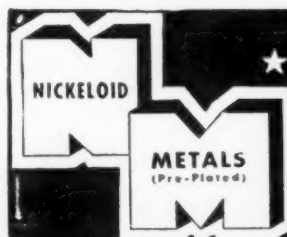
Our Singleton Production Tank, a Lucite tank within a steel tank, is the ideal, permanent answer to your plating problems at no higher cost. Liners for your present tanks.

Everything in Plastics for the Platers.

SINGLETON COMPANY • 9823 Lorain Ave., Cleveland 2, O.
Woodbine 9056

35th ANNUAL CONVENTION AMERICAN ELECTROPLATERS' SOCIETY ATLANTIC CITY, N. J.

June 28-July 1, 1948 inclusive
INDUSTRIAL FINISHING EXPOSITION
Convention Hall



NICKEL • CHROMIUM • BRASS • COPPER
Electro-plated TO ALL COMMON BASE METALS
ALSO LACQUERED COLORS
SHEETS AND COILS

AMERICAN NICKELOID COMPANY
Established 1898 PERU, ILLINOIS

INDEX TO VOLUME 45

METAL FINISHING, January-December, 1947

ARTICLES

A

Abstracts of Papers Presented at 34th Annual A.E.S. Convention	8-48
After Taxes Profits, If Any	8-65
Alkaline Metal Cleaners, Testing of	12-77
All Our Yesterdays—Part VI	7-77
Alloys by Electrodeposition	12-65
Aluminum Dyeing, Color Control for	1-64
Aluminum, Electroplating on	11-67
Aluminum Electroplating in America	5-66
Aluminum Electropolishing Plant	8-63
American Electroplaters' Society Annual Convention	6-70
American Electroplaters' Society Convention Breaks All Records	7-62
American Electroplaters' Society National Convention and Industrial Finishing Exposition	5-54
Application of Metallic Coatings	5-62, 12-71
Application of Zinc Coatings	12-71
Automatic Plating Plant, Largest in the World	7-67

B

Barrel Plated Multiple Coatings	6-81
Barrel Plating, Pre-treatment for	11-75
Barrel Plating Technique, Improved	3-55
Brass Plating: Routine Chemical Control	4-66
Buffing Problem, Fishtails—An Old	9-68

C

Cell, The Hull	1-59
Chemicals in Electroplating, Toxicity	8-55, 9-79
Chrome Plating, Hard, Metal Surfacing by	7-71
Cleaning—Methods and Results, Metal	10-82
Cleaners, Testing of	12-77
Color Control for Aluminum Dyeing	1-64
Consulting the Floor Doctor	12-62
Control Laboratory, Electroplating	9-60
Control, Routine Chemical	4-66
Copper Reduction on Non-Conductors, Practical	9-64
Copper, Oxidation of with Sodium Chlorite	3-61
Cosmetic Gloves from Electroformed Molds	8-61
Cyanide Wastes, Disposal of	2-78, 3-68

D

Determination of Free Sodium Hydroxide and Sodium Carbonate in Plating Solutions	4-72
Determination of Silver and Copper in One Sample of Plating Solution	11-80
Developments of 1946	1-50
Disposal of Cyanide Wastes	2-78, 3-68

E

Electrodeposited Coatings, Engineering Applications of	6-78
Electrodeposited Tin Coatings, Fusing of	4-63
Electrodeposition, Alloys by	12-65
Electroformed Molds, Gloves from	8-61
Electrolytic Polishing of Magnesium	6-86, 7-84
Electroplated Zinc, Surface Texture Study of	8-68
Electroplater, Metallography for the	4-54, 5-68
Electroplaters' Society Convention Breaks All Records, American	7-62
Electroplating Control Laboratory	9-60, 10-68
Electroplating in America, Aluminum	5-66
Electroplating in World War II, Military Applications of	1-66

Electroplating Non-Conductors	6-95
Electroplating on Aluminum	11-67
Electroplating, Rectifiers for	2-73, 4-58, 5-72, 6-88, 9-75
Electroplating, Introductory Survey of	11-70, 12-79
Electroplating Zinc Base Die Castings	3-58
Electropolishing Plant, Aluminum	8-63
Electropolishing Silver to Reduce Finishing Costs	5-60
Electropolishing with Fluosulfonic Acid	2-63, 3-64
Engineering a Small Job-Plating Shop	7-69
Engineering Application of Electrodeposited Coatings	6-78
Evaluation of Metal Surfaces, Optical Methods for	4-70

F

Fellowship Club, International	7-64
Finishing Copper by Oxidation with Sodium Chlorite	3-61
Finishing Exposition in Eleven Years, First	3-50
Finishing Exposition, Industrial	2-62, 7-65
First Finishing Exposition in Eleven Years	3-50
Fishtails—An Old Buffing Problem	9-68
Floor Doctor, Consulting the	12-62
Fluid Mechanics: Forgotten Factor in Electroplating	10-72
Fluosulfonic Acid, Electroplating with	2-63, 3-64
Forgotten Factor in Electroplating: Fluid Mechanics	10-72
Free Sodium Hydroxide and Sodium Carbonate in Plating Solutions, Determination of	4-72
Fusing of Electrodeposited Tin Coatings	4-63

G

Gloves from Electroformed Molds, Cosmetic	8-61
Grinding Goes Modern, Polishing and	3-51

H

Hard Chromium Plating, Metal Surfacing by	7-71
Heavy Industrial Nickel Plating	5-56
High Production Job Shop Plating	9-71
Hull Cell, The	1-59

I

Improved Barrel Plating Technique	3-55
Industrial Finishing Exposition	2-62, 7-65
Industrial Plating of Zinc Base Die Castings	7-82
International Fellowship Club	7-64
Introductory Survey of Electroplating	11-70, 12-79

J

Job-Plating Shop Engineering, A	7-69
Job Shop Plating High Production	9-71

L

Largest Automatic Plating Plant in the World	7-67
Los Angeles Plating Plant Explosion	3-72

M

Magnesium, Electrolytic Polishing of	6-86, 7-84
Mechanical Surface Finishing, Modern	11-62, 12-82
Metal Cleaning—Methods and Results	10-82
Metal Congress and Exposition to Be Held in Chicago, October 18-24, National	10-60
Metal Surfacing by Hard Chromium Plating	7-71
Metallic Coatings, Application of	5-62, 6-91
Metallography for the Electroplater	4-54, 5-68
Military Applications of Electroplating in World War II	1-66

Modern Mechanical Surface Finishing	11-62, 12-82
Multiple Coatings, Barrel Plated	6-81

N

National Metal Congress and Exposition to Be Held in Chicago, October 18-24	10-60
Nickel Plating, Heavy Industrial	5-56
Non-Conductors, Copper Reduction on	9-68
Non-Conductors, Electroplating	6-95

O

Optical Methods for Evaluation of Metal Surfaces	4-70
Our Yesterdays, All—Part VI	7-77
Oxidation with Sodium Chlorite, Finishing Copper by	3-61

P

Palladium, Plating with	1-50
Papers Presented at 34th Annual A.E.S. Convention, Abstracts of	8-48
Periodic Reverse-Current Electroplating	2-60
Plated Zinc Base Die Castings	10-60
Plating of Zinc Base Die Castings, Industrial	7-82
Plating Plant Explosion, Los Angeles	3-72
Plating with Platinum, Palladium and Rhodium	1-50
Plating with Palladium and Rhodium, Plating with	1-50
Polishing and Grinding Goes Modern	3-51
Polishing of Magnesium, Electrolytic	6-86, 7-84
Polishing Trade, Tricks of the	11-78
Practical Copper Reduction on Non-Conductors	9-64
Practical Methods in Heavy Industrial Nickel Plating	5-56
Pre-treatment for Barrel Plating	11-75
Profits After Taxes, If Any	8-65

R

Rectifiers for Electroplating	2-73, 4-58, 5-72, 6-88, 9-75
Reduce Finishing Costs, Electroplating Silver to	5-60
Reverse-Current Electroplating, Periodic	2-60
Rhodium, Plating with	1-50
Routine Chemical Control, Brass Plating	4-66

S

Silver and Copper, Determination of, in One Sample of Plating Solution	11-80
Silver, Electroplating of	5-60
Small Job-Plating Shop, Engineering a	7-69
Surface Texture Study of Electroplated Zinc	8-68
Survey of Electroplating, Introductory	11-70, 12-79

T

Taxes, Profits After	8-65
Technical Developments of 1946	1-50
Testing of Alkaline Metal Cleaners	12-77
Tin Coatings, Fusing of	4-63
Toxicity of Chemicals in Electroplating	8-55, 9-79
Tricks of the Polishing Trade	11-78

Z

Zinc Base Die Castings, Electroplating	3-58
Zinc Base Die Castings, Industrial Plating of	7-82
Zinc Base Die Castings, Plated	10-60
Zinc Coatings, Application of	12-71
Zinc, Electroplated Surface Texture Study of	8-68

HIGH TEMPERATURE LUCITE PLATING TANKS for LABORATORY and PRODUCTION PLATING



Singleton tanks are made of high temperature Lucite to give unlimited life, resistance to all aqueous acids with no contamination even when changing from one bath to another, ruggedness, heat and electrical insulation, and transparency.

SEE THE BATH IN ACTION

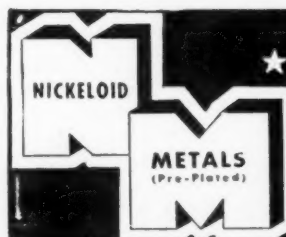
Our Singleton Production Tank, a Lucite tank within a steel tank, is the ideal, permanent answer to your plating problems at no higher cost. Liners for your present tanks.

Everything in Plastics for the Platers.

SINGLETON COMPANY • 9823 Lorain Ave., Cleveland 2, O.
Woodbine 9056

35th ANNUAL CONVENTION AMERICAN ELECTROPLATERS' SOCIETY ATLANTIC CITY, N. J.

June 28-July 1, 1948 inclusive
INDUSTRIAL FINISHING EXPOSITION
Convention Hall



NICKEL • CHROMIUM • BRASS • COPPER
Electro-plated TO ALL COMMON BASE METALS
ALSO LACQUERED COLORS
SHEETS AND COILS

AMERICAN NICKELOID COMPANY
Established 1898 PERU, ILLINOIS

AUTHORS

Black, George, Consulting the Floor Doctor	12-62	Lunt, R. L., Surface Texture Study of Electroplated Zinc	8-68	Roehl, E. J., Plated Zinc Base Die Castings	10-63
Black, George, Electrolytic Polishing of Magnesium	6-86, 7-84	Mankowich, A., Testing of Alkaline Metal Cleaners	12-77	Sedusky, H. J., and Mohler, J. B., Electroplating Control Laboratory	9-60
Blazy, Alex, and Mohler, J. B., Metallography for the Electroplater	4-54, 5-68	Manler, Martin, Modern Mechanical Surface Finishing	11-62, 12-82	Sedusky, H. J., and Mohler, J. B., The Hull Cell	1-59
Bloom, William, Military Applications of Electroplating in World War II	1-66	Mansell, Rick, Application of Metallic Coatings	5-62, 6-91	Silverman, Louis, Determination of Free Sodium Hydroxide and Sodium Carbonate in Plating Solutions	4-72
Broomfield, John, and Vernon, Arthur A., Optical Methods for Evaluation of Metal Surfaces	4-70	Mansell, Rick, Introductory Survey of Electroplating	11-70, 12-79	Silverman, Louis, Determination of Silver and Copper in One Sample of Plating Solution	11-80
Cort, Irving; Milton, Clare L. Jr.; Neilson, Carl A.; and Cowan, Irving, Cosmetic Gloves from Electroformed Molds	8-61	Mazzone, Mario, and McKnight, Floyd, Barrel Plated Multiple Coatings	6-81	Spelvin, George, All Our Yesterdays—Part VI	7-77
Cowan, Irving; Cort, Irving; Milton, Clare L. Jr., and Neilson, Carl A., Cosmetic Gloves from Electroformed Molds	8-61	Mazzone, Mario, and McKnight, Floyd, Pre-treatment for Barrel Plating	11-75	Steele, Robert, Application of Zinc Coatings	12-71
Dickinson, Thomas A., Electroplating Non-Conductors	4-70, 7-77	McKnight, Floyd, and Mazzone, Mario, Barrel Plated Multiple Coatings	6-81	Sternal, L. S., Polishing and Grinding Goes Modern	3-51
Diggin, Myron B., Electroplating on Aluminum	11-67	McKnight, Floyd, and Mazzone, Mario, Pre-treatment for Barrel Plating	11-75	Summers, F. P., and Rhael, E., Color Control for Aluminum Dyeing	1-64
Diggin, Myron B., Engineering Applications of Electrodeposited Coatings	6-78	Meyer, Walter R., and Vincent, G. P. Finishing Copper by Oxidation with Sodium Chlorite	3-61	Temple, Charles, Industrial Plating of Zinc Base Die Castings	7-82
Dobson, John G., Disposal of Cyanide Wastes	2-78, 3-68	Milton, Clare L. Jr.; Cort, Irving; Neilson, Carl A.; and Cowan, Irving, Cosmetic Gloves from Electroformed Molds	8-61	Van Arsdell, P. M., Toxicity of Chemicals in Electroplating	8-55, 9-79
Dunroe, Louis J., High Production Job Shop Plating	2-64, 10-61	Mohler, J. B., and Blazy, Alex, Metallography for the Electroplater	4-54, 5-68	Vernon, Arthur A., and Broomfield, John, Optical Methods for Evaluation of Metal Surfaces	4-70
Ewing, Jas. Rowan, Metal Cleaning—Methods and Results	7-82	Mohler, J. B., and Sedusky, H. J., Alloys by Electrodeposition	12-65	Vincent, G. P., and Meyer, Walter R., Finishing Copper by Oxidation with Sodium Chlorite	3-61
Falk, J., Fusing of Electrodeposited Tin Coatings	1-56	Mohler, J. B., and Sedusky, H. J., Electroplating Control Laboratory	9-60	Young, C. B. F., and Hesse, Kenneth R., Electropolishing with Fluosulfonic Acid	2-63, 3-64
Gray, Daniel, Electropolishing Silver to Reduce Finishing Costs	3-51	Mohler, J. B., and Sedusky, H. J., The Hull Cell	1-59	Zentler-Gordon, H. E., and Roberts, E. R., Brass Plating; Routine Chemical Control	4-66
Haberman, H. M., Plating with Platinum, Palladium and Rhodium	7-84	Monacell, Flory, Profits After Taxes, If Any	8-65		
Halvorsen, Edwin H., Metal Surfacing by Hard Chromium Plating	11-76	Moore, H., Tricks of the Polishing Trade	11-78		
Head, Herbert E., Improved Barrel Plating Technique	9-64	Mozer, Richard A., Technical Developments of 1946	1-50		
Herr, Fred A., Aluminum Electropolishing Plant	11-73	Narcus, Harold, Practical Copper Reduction on Non-Conductors	9-64		
Hesse, Kenneth R., and Young, C. B. F., Electropolishing with Fluosulfonic Acid	2-63, 3-64	Neilson, Carl A.; Cort, Irving; Milton, Clare L. Jr.; and Cowan, Irving, Cosmetic Gloves from Electroformed Molds	8-61		
Jernstedt, George W., Periodic Reverse-Current Electroplating	2-68	Nixon, C. F., Electroplating Zinc Base Die Castings	3-58		
Kushner, Joseph B., Fluid Mechanics: Forgotten Factor in Electroplating	10-72	Reinken, Louis W., Rectifiers for Electroplating	2-73, 4-58, 5-72, 6-88		
Lakos, A., Engineering a Small Job-Plating Shop	7-69	Rhael, E., and Summers, F. P., Color Control for Aluminum Dyeing	1-64		
		Roberts, E. R., and Zentler-Gordon, H. E., Brass Plating; Routine Chemical Control	4-66		
		Roehl, E. J., Practical Methods in Heavy Industrial Nickel Plating	5-56		

BUFFS, CLEANERS

**BUFFING COMPOSITIONS
NICKEL ANODES
CHEMICALS AND GENERAL
SUPPLIES**

JACOB HAY COMPANY
4014 W. Parker Avenue
Chicago, Ill.
Albany 2742

*If you have a Dust Problem then
change to*



TRADE MARK REG. U. S. PAT. OFF.

**DUSTLESS HARDWOOD SAW-
DUST • DRYING • TUMBLING
CLEANING**

always uniform—Used by Leading Plating
Plants manufacturing metal specialties, Plas-
tics, Jewelry and allied Industries.

NATIONAL SAWDUST CO., INC.
76 N. 6th St., Brooklyn 11, N. Y.

Free samples and quotations on request.

UNISOL

Paint Stripper

*A New Development For Industrial
Paint Stripping*

- Non Inflammable.
- Used Cold.
- Works Rapidly on All Types of Finishes.
- Non Injurious to Hands.
- Unisol Liquid—For Dipping, Dries Rapidly with no After Film to Interfere with Re-painting.

*Samples and further information
supplied on request.*

CHEMCO PRODUCTS COMPANY, Inc.
1059 East 76th Street
Chicago 19, Illinois

Season's Greetings

*A Prosperous and Happy New Year
to all our Friends*

UNITED LABORATORIES CO.
LINDEN, N. J.



Manufacturers of
Bufs, Compounds and Plating Supplies

Why Platers Prefer

CADATROL

Cadmium Brightener

- Brighter, More Uniform Deposits
- Lower Consumption—Lower Costs
- Exceptionally High Throwing Power
- Wide, Uniform Plating Range

A 2-lb. sample will be mailed upon request.

R. A. HOFFMAN CHEMICAL CO.
1734 GLENRIDGE RD.
EUCLID 17, OHIO